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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/367,623 | 11/23/1999 | CHRISTOPHE LORIN | RCA89726 | 4576 |

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EXAMINER

HAROLD, JEFFEREY F

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------|-------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/367,623 | LORIN, CHRISTOPHE |
| Examiner | Art Unit | |
| Jefferey F. Harold | 2644 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on ____.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-10 is/are pending in the application.

4a) Of the above claim(s) ____ is/are withdrawn from consideration.

5) Claim(s) ____ is/are allowed.

6) Claim(s) 1 and 3-10 is/are rejected.

7) Claim(s) 2 is/are objected to.

8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. ____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). ____.

2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) Other: ____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.84(o). The drawings must show every feature of the invention specified in the claims. Therefore, descriptive legends must be shown for the elements disclosed in the drawings. No new matter should be entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. ***Claims 1, 3-5, and 6-10*** are rejected under 35 U.S.C. 102(b) as being anticipated by Kakuishi (United States Patent 5,287,406).

Regarding **claim 1**, Kakuishi discloses a hybrid circuit having a converting function. In addition, Kakuishi discloses an apparatus for automatically matching the levels of the signal exchanged between first apparatus and a second apparatus which communicates with the first apparatus via a transmission line characterized in that:

the signal which comes from the transmission line (via transformer 11) and is received by the first apparatus (figure 6) is digitized;

on the basis of the digital data representing the signals exchanged with the transmission line, an estimate is made of the inherent transfer function (18) equal to the ratio of the signal received by the first apparatus to the signal transmitted by the first apparatus;

each of the exchanged signals is respectively multiplied by a suitable gain (12 and 13) determined on the basis of the estimated value of the transfer function, as disclosed at column 5, line53 through column 6, line17 and exhibited in figure 6.

Regarding **claim 3**, Kakuishi discloses everything claimed as disclosed above (see claim 1), in addition Kakuishi discloses wherein the gain of the signal received by the first apparatus is chosen so that the component of the signal transmitted by the second apparatus in the signal received by the first apparatus is independent of the impedance of the transmission line, as disclosed at column 8, lines 32-58 and exhibited in figure 6.

Regarding **claim 4**, Kakuishi discloses everything claimed as applied above (see claim 1), in addition Kakuishi discloses wherein the gain of the signal transmitted by the first apparatus is chosen so that the component of the signal transmitted by the second apparatus in the signal received by the second apparatus is independent of the impedance of the transmission line, as disclosed at column 8, lines 32-58 and exhibited in figure 6.

Regarding **claim 5**, Kakuishi discloses everything claimed as applied above (see claim 3), in addition Kakuishi discloses wherein the calculation method implements an inherent identification algorithm.

Regarding **claim 6**, Kakuishi discloses a device for automatically matching levels of signals exchanged between a first apparatus and a second apparatus communicating via a transmission line, wherein:

a analog/digital converter (15) capable of digitizing a signal entering the first apparatus;
a digital/analog converter (16) capable of converting a signal transmitted by the first apparatus;

a calculation block (18) intended to estimate the ratio of the incoming signal to the signal transmitted by the first apparatus, and to determine the gains needed for matching the levels of the signals transmitted and received by the first apparatus, the gains being dependent on the said ratio, as disclosed at column 5, line 53 through column 6, line17 and exhibited in figure 6.

Regarding **claims 7 and 10** they are interpreted and thus rejected for the reasons set forth above in the rejection of claims 1 and 2-6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 8 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakuishi in view of well know prior art (MPEP 2144.03).

Regarding **claims 8 and 9**, Kakuishi disclose everything claimed, as applied above, (see claims 5 and 8 respectively), however, Kakuishi fails to disclose a dsp circuit that utilizes a LMS algorithm. However, the examiner takes official notice of the fact that it was well known in the art to provide dsp circuit that utilizes a LMS algorithm.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kakuishi by specifically providing dsp circuit that utilizes a LMS algorithm, for the purpose of adaptively adjusting the gain.

Citation of Pertinent Art

4. The Prior art of record and not relied upon is considered pertinent to applicant's disclosure.

Cannan et al. (United States Patent 4,984,265), device for forming the hands-free function in a telephone set, associating the gain switching and echo suppression.

Allowable Subject Matter

5. **Claim 2** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jefferey F. Harold whose telephone number is (703) 306-5836. The examiner can normally be reached on Monday-Friday 7:30am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

JFH
JFH
June 14, 2003

Jeffrey
FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600